

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	2321	(427/528,529,530,531,576,577).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/07/15 08:58
2	L2	355	(204/192.16).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/07/15 08:58
3	L3	2614	1 or 2	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/07/15 09:13
4	L4	1220	3 and(wear resistant erosion corrosion multilayer multi adj layer)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/07/15 09:16
5	L5	1204	3 and(Ti titanium Zr zirconium TiN ZrN TiB ZrB)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/07/15 09:18

09/700,473

	L #	Hits	Search Text	DBs	Time Stamp
6	L6	1664	4 or 5	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/07/15 09:19

(L6) #18 6,372,303 Burger et al
alternat C & Si individual layers
wear-resist & friction reducing

#61 too slow

6 and ((metal metallic steel nickel Ni Titanium Ti alloy) near 5 (substrate
workpiece piece article object surface component)) ⇒ 1151 hits

6 and ((ion) ^{with} ~~near~~ 3 (mix mixing implant^{ed} implantation)) ⇒ 304 hits

748 ⇒ 235 hits #19

#16 6,171,659 (Brunde et al) - sub-matrix metal, dep. metal & Reaction implant ^{TiN} _{ZrN...}

#22 6,083,876 (Vesnovacky et al) - implant/dep/implant ^{seeds} _{intermediate layer} ^{dep.} _{but all same in}

#25 6,054,185 (Inspektor et al) (D) Ref. to specific coating scheme Fig 1+2 → base adhesion layer 38 = Ti (or Zr) _{sub/Ti/B2/BiN/C/BN}

#67 5,593,778 (Muller et al) (B) Use of ion implant ^{externally} _{on bulk mat} ^{on surface} _{on bulk mat}
(B) Ion treat... noble gases - chemical mixing method
(B) Both mixed into physical method...

#75 5,458,928 (Kiyama et al) (D) Fig 1 is - for ZrN films... Sub. 3-Ni, drop series 4 (Er) & N⁺
(D) Although @ atom exp. ZrN & Er & Sulfur resists w/ Ti → TiN

#93 5,246,711 (Oubata et al) Fig. 1 - Backgr 1

Back to PALM | ASSIGNMENT | OASIS | Home page

Step at #20 - 6,406,760

Fast Search - JSK 7/15/02

- (L9) (#111) 5013,419 (Rickaby et al) (D) The general procedure ... sub control Ti ... or TiN
 $TiN \in R_{x, gas} N_2$
- (#113) 4,992,153 (Bergmann et al) - adhesion forming layers, ClS/cant. depts
 R_{x} sputtering
- (#114) 4,990,233 (Hahn) (D) Hunches values 10 ... apply desirability method of (Ti) (TiO)
 ... we start that ion imp. can cause alloy between Ti & TiN
 (D) Also, what ion imp. pref. app. ... other metals - but more wear parts
 (D) The improved ch. ... ion imp. \Rightarrow surface alloy, gradual comp
- (#117) 4,915,746 (Welsh) Front Fig. multiple metal layers dep & implant @ of (montages, etc) before another dep.
 i_{ion}
- (#130) 4,762,756 (Bergmann et al) (B) The depth of distribution, are variational possible ...
 combination of Ti & N (D) Formed part of ... steel ... nitrided, ... TiN ...
 $N_2 + Ar$
- (#132) 4,759,948 (Hashimoto et al) Abs - co-dep. - low & high energy beams - ions at surface
 (D) Concerns species of ions - inert - Ar, ... N_2 , O for subsequent dep ... TiN film
 Ex. 4 (cont'd) TiN on Al/Si Alloy
- (#136) 4,727,905 (Zhed et al) Abs - wear resistant w/ interstitial plasma - are comp Ti, The use of
 (D) A technique for ... Ti dep & Fe Ti alloys form at surface
 (D) Then the bias voltage \downarrow ... $N_2 \Rightarrow TiN$
- (#137) 4,724,016 (Anthony) - ion imp (N₂...) of (Zr + its alloys)
 Sub
- (#140) 4,697,325 (Kamigaito et al) use ion irradi to join metal & ceramic parts
 (Cite K Kobayashi et al 4,402,984)
- (#142) 4,683,149 (Suzuki et al) Fig. Front Ar
 $i_{ion} / dep / i_{ion} / dep$
- (#147) 4,634,600 (Shen et al) Abs fig simultaneous metal dep w/ ion imp (metal erosion)
 (D) In order to overcome ... TiN coat ...
- (#188) 3,915,757 (Engel et al) Abs - ion implant through oxide onto sub, since $Ar \Rightarrow$ high temp